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Cotton Fiber and Processing Test Results

CROP of

1976



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 December 31, 1976

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

1/ Summary of Cotton Fiber and Processing Test Results, Crop of 1975, USDA, AMS, Cotton Division, May 1976.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1976

Discussion of Test Results

Southwestern short staple cottons tested through December 24 this season are longer, coarser and weaker than a year earlier, according to the Cotton Division, Agricultural Marketing Service, USDA. Shirley Analyzer nonlint content is lower, while picker and card waste is higher than a year ago. Yarns spun from these samples are weaker but have fewer yarn imperfections. Average spinning potential yarn number is lower.

Average test results for all medium staple samples show fibers to be shorter and stronger than last season. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarn skein strength is slightly higher and imperfections are fewer than a year earlier. Spinning potential is slightly lower.

Southeastern medium staple samples are slightly longer, more uniform, coarser and stronger at both zero gage and 1/8" gage strength tests. Shirley Analyzer nonlint content is lower. Yarns spun from these samples are stronger with fewer imperfections. Spinning potential yarn number is higher.

South Central medium staple samples tested thus far this season are shorter and less uniform than a year ago. Cottons are stronger at zero gage strength tests. Shirley Analyzer nonlint content is lower, while picker and card waste is higher. Yarns are slightly stronger and have fewer yarn imperfections. The average spinning potential yarn number is lower.

Southwestern medium staple samples tested are more uniform, coarser and slightly weaker at zero gage strength tests. Shirley Analyzer nonlint content is lower, while picker and card waste is higher than last season. Yarns are stronger and have higher appearance grades. Imperfections are fewer.

Medium staple samples tested from the West have slightly coarser and weaker fibers than a year ago. Picker and card waste is slightly higher. Yarns spun from these samples are weaker with lower appearance grades. Spinning potential is lower.

Average test results for all long staple samples tested through December 24 show longer and coarser fibers than a year earlier. Picker and card waste is lower as is comber waste. Yarns spun from these samples are stronger than last season and have fewer imperfections.

Long staple samples from the Southeast are much longer, more uniform and stronger than a year ago. Shirley Analyzer nonlint content, picker and card waste and comber waste are all lower than last season. Yarns spun from these samples are stronger. Appearance grades are lower. Average spinning potential is higher.

No additional lots were received from the South Central or Western area during this test period.

American Pima samples tested to date show fibers to be longer, less uniform and weaker at zero gage strength tests. Picker and card waste and comber waste are both lower than a year ago. Yarn quality is about the same as a year ago.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through December 24, 1976

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results									
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.						
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex	Pct.		Skein str.	Appear- ance	Imperf- actions			
				Inches			Pct.	Index				No.						
																No.		
22s Carded Yarn																		
Short Staple: Southwest	38	.94	45	3.8	86	22	3.7	6.7	97	112	17	41						
	36	.96	45	4.4	85	21	3.3	7.1	87	112	14	38						
Medium Staple: Southeast	41	1.07	44	4.2	83	22	3.8	6.3	97	98	25	53						
	45	1.08	45	4.6	85	23	3.1	6.4	106	98	20	56						
South Central	113	1.10	45	4.3	85	23	3.2	5.6	105	101	21	59						
	119	1.08	44	4.2	88	23	2.7	6.3	108	99	17	56						
Southwest	31	1.06	43	3.8	83	22	3.5	5.9	102	88	31	56						
	31	1.06	45	4.1	82	22	3.3	6.5	104	96	22	56						
West	65	1.12	45	4.1	93	26	2.3	5.5	124	94	22	69						
	56	1.12	45	4.2	90	25	2.2	5.7	120	90	19	67						
U.S. Average	250	1.09	45	4.2	86	23	3.1	5.7	108	97	23	60						
	251	1.08	45	4.2	87	24	2.7	6.2	110	96	19	58						
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3						

1/ Based on a limited number of samples of modal quality
2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 24, 1976
1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results					Processing Test Results									
		Length		Mike	Strength Zero gage	SA Non- lint	P&C Waste	Comber Waste	Yarn Quality				SPY			
		Span	Unif						Strength carded	Appearance carded	Imprfctns card	combed				
No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.		
22s Carded & Combed Yarn																
Long Staple: Southeast	17	1.09	43	4.2	85	23	3.7	9.6	18.8	91	115	110	119	20	10	54
	11	1.15	45	4.3	87	25	3.1	6.7	15.8	116	137	103	115	21	9	67
South Central	6	1.11	43	4.0	88	23	3.8	9.2	18.1	104	125	110	120	19	9	62
	3	1.12	42	3.7	91	26	3.4	6.8	20.3	109	137	97	103	13	10	57
West	12	1.16	45	3.4	95	26	2.5	7.9	15.9	138	158	89	102	30	16	87
	1	1.20	48	3.8	89	26	2.9	6.4	11.8	147	162	90	100	30	12	103
U.S. Average	35	1.12	44	3.9	89	24	3.3	9.0	17.6	109	132	103	113	23	12	67
	15	1.15	44	4.2	88	25	3.2	6.7	16.4	117	138	101	112	20	9	67
Array																
American Pima																
Extra Long Staple: West	7	1.47	31	3.7	105	34	2.4	7.5	18.3	66			111		2	
	10	1.48	30	3.7	102	34	2.4	6.6	15.3	65			109		2	
50's Combed Yarn																
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	5	5	2	2	2	2	3
									4(22s) 2(50s)							

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results						Processing Test Results - Carded Yarns													
No	Grade	Name & Code	Stple 32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Potent- ial	
				2.5% span	Unif		Zero Gage	1/8" Gage			Pct	No		No	8s or 74 tx	Lbs	Pct	8s or 74 tx	No	22sor 27 tx	8s or 74 tx		22sor 27 tx
SOUTHWEST AREA																							
CENTRAL TEXAS																							
WACO																							
3 LM	51	1/32	1.00	43		4.6	84	22	LANKART LX571	3.8	3	3	8.4	284	96	6.7	6.0	130	120	27	16	50	
100 PERCENT																							
NORTHWEST TEXAS																							
ANSON																							
1 LM LT SP	52	2/31	0.97	46		4.3	81	21	LANKART 611	3.3	3	3	7.0	270	88	7.7	6.7	120	100	36	19	42	
100 PERCENT																							
BURKBURNETT																							
2 LM	51	1/33	1.04	46		5.0	87	22	LANKART LX571	3.6	2	3	6.5	285	95	7.9	5.6	130	110	25	15	45	
100 PERCENT																							
HART																							
80 PERCENT																							
1 MID SP	33	30	0.93	45		3.3	83	21	STRIPPER 31	4.1	4	6	7.5	279	89	7.4	6.3	120	110	36	21	40	
2 SLM SP	43	30	0.97	45		3.3	83	22		4.2	4	6	7.7	303	99	7.8	6.5	130	110	24	16	46	
70 PERCENT																							
LAMESA																							
2 SLM LT SP	42	3/31	0.96	46		4.1	80	20	BLIGHTMASTER A5	3.8	1	4	6.8	279	90	8.5	6.7	130	120	17	10	42	
80 PERCENT																							
LOCKNEY																							
80 PERCENT																							
2 LM LT SP	52	2/32	0.95	46		3.6	83	20	MORCOT M70	3.5	3	4	7.1	308	103	7.7	6.2	120	110	36	17	51	
90 PERCENT																							
LOCKNEY																							
2 SLM SP	43	30	0.92	47		3.9	82	20	PAYMASTER 18	3.8	3	5	8.1	269	85	6.9	5.3	130	110	39	23	36	
90 PERCENT																							
LOOP																							
2 SLM	41	29	0.87	47		5.4	83	19	PAYMASTER 18	2.3	1	4	6.9	250	72	6.3	5.2	130	110	14	10	26	
90 PERCENT																							
LUBBOCK																							
75 PERCENT																							
1 MID SP	33	31	0.97	47		4.0	80	22	PAYMASTER 909	3.4	3	5	6.1	307	102	8.2	6.7	130	120	24	13	56	
100 PERCENT																							
RULE																							
1 SLM	41	32	1.02	44		4.8	87	20	LANKART LX571	2.7	2	3	6.2	278	90	7.1	5.7	130	110	23	10	44	
90 PERCENT																							
TULIA																							
2 SLM LT SP	42	30	0.94	47		4.0	86	21	STRIPPER 31	3.6	2	4	6.5	278	91	7.1	5.9	130	120	21	13	40	
90 PERCENT																							
OKLAHOMA																							
GRANDFIELD																							
2 SLM LT SP	42	31	0.96	45		5.3	88	20	LANKART 57	2.6	2	3	7.0	256	79	6.5	5.3	130	110	19	13	32	
95 PERCENT																							

1/ Reduced from 41 because of bark

2/ Reduced from 42 because of bark

3/ Reduced from 32 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
				2.5% span	Unif.		Zero Gage	1/8" Gage			Pct	Pct		Gra	Yel	Lbs	Lbs	Pct	Pct	22s or 27 tx	50s or 12 tx		22s or 27 tx
SOUTHEAST AREA																							
ALABAMA																							
MERIDIANVILLE																							
3 SLM	41	33	1.03	45		4.0	85	24	6.8	3.2	2	3	7.3	96	28	5.9	3.7	90	70	26	19	48	
100 PERCENT																							
MONTGOMERY																							
2 SLM	41	35	1.11	44		4.6	81	23	7.2	2.2	1	2	6.5	106	36	6.3	4.6	100	80	19	15	57	
3 SLM LT SP	42	34	1.15	43		4.2	76	22	8.3	2.5	2	3	5.6	111	38	6.8	5.3	80	70	29	25	69	
80 PERCENT																							
MOUNDVILLE																							
2 SLM	41	34	1.06	44		4.5	83	22	6.1	1.9	1	3	5.8	101	33	5.6	4.4	90	70	24	18	53	
80 PERCENT																							
NORTHPORT																							
3 SLM	41	34	1.09	44		4.2	79	22	7.7	2.0	1	3	5.8	109	36	6.2	4.8	90	80	20	19	58	
80 PERCENT																							
PRATTVILLE																							
2 SLM	41	35	1.11	45		4.5	92	25	5.6	2.7	2	2	6.7	117	40	5.6	4.5	100	80	17	17	62	
95 PERCENT																							
SCOTTSBORO																							
3 SLM SP	43	34	1.11	45		3.9	81	23	6.6	2.9	3	5	6.4	118	41	6.2	4.8	100	70	25	22	72	
73 PERCENT																							
GEORGIA																							
ALLEN TOWN																							
3 LM	51	35	1.07	46		5.0	84	23	6.5	4.4	3	3	7.9	96	29	5.3	3.5	90	80	26	20	43	
99 PERCENT																							
BOSTWICK																							
3 LM	51	35	1.06	47		4.4	88	23	7.2	4.3	3	3	7.9	115	37	6.1	4.5	100	90	14	11	63	
100 PERCENT																							
SHELLMAN																							
2 SLM LT SP	42	35	1.08	45		4.9	79	22	6.7	1.8	3	3	5.7	98	32	5.8	3.9	90	80	17	13	53	
70 PERCENT																							
SOCIAL CIRCLE																							
2 SLM	41	35	1.08	47		4.7	84	23	6.1	3.9	2	3	7.0	106	34	5.7	4.3	90	70	24	22	59	
98 PERCENT																							
SOUTH CAROLINA																							
BLACKVILLE																							
3 LM LT SP	52	34	1.10	45		4.6	88	23	6.4	3.5	2	3	6.9	110	38	5.9	4.5	90	80	22	20	60	
100 PERCENT																							

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976--(Continued)

Production Area, Classification Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
				Digital Fibrogram		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprct'ns		Spin. Poten- tial
No	Grade	Style	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	Gra	Yel	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTH CENTRAL AREA																							
ARKANSAS																							
OSCEOLA																							
51	34		1.05	42	3.5	83	21	5.8	1.8	2	2			9.4	99	32	5.6	3.9	80	60	36	29	50
LOUISIANA																							
EPPS																							
31	35		1.09	45	4.7	87	25	7.2	2.2	1	3			6.2	115	37	6.5	4.7	90	80	17	11	62
LAKE PROVIDENCE																							
41	35		1.10	44	4.1	86	23	7.5	3.0	1	2			6.6	118	39	6.9	4.9	90	70	21	17	67
LAKE PROVIDENCE																							
41	34		1.07	45	4.6	82	23	6.6	2.5	1	2			7.0	106	34	6.4	4.2	90	70	25	16	55
MONROE																							
41	34		1.09	44	4.6	85	24	7.7	2.2	1	2			5.4	113	38	6.1	4.4	90	70	19	15	63
OAK RIDGE																							
41	34		1.08	47	4.8	91	23	6.2	2.2	1	2			5.9	114	38	6.0	4.4	100	80	20	14	60
OPELOUSAS																							
41	34		1.03	44	3.8	82	22	6.6	3.4	2	2			7.6	97	30	6.0	4.2	90	70	23	20	56
SHREVEPORT																							
41	35		1.10	43	3.7	86	23	7.7	1.8	1	3			5.1	109	37	6.7	4.7	100	80	15	10	59
MISSISSIPPI																							
DUCK HILL																							
41	34		1.01	43	3.9	83	21	7.6	2.6	2	2			6.9	102	32	6.1	4.4	110	70	18	19	59
NATCHEZ																							
41	35		1.11	43	4.1	80	24	6.7	2.8	1	2			6.9	111	36	6.5	4.9	100	90	14	12	61
SUNFLOWER																							
41	33		1.05	43	4.3	84	23	6.3	2.8	2	2			7.4	104	35	6.0	4.3	100	80	15	17	59
TRIBBETT																							
51	34		1.04	46	4.9	89	23	5.8	4.3	3	2			8.2	100	33	5.1	3.7	110	80	19	15	53

1/ Cotton stuck to processing rolls

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent'ial	
				2.5% span	Unif.		Zero Gage	1/8" Gage			Pct	Pct		Gra	Yel	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		22s or 27 tx
WEST AREA--(Continued)																							
CALIFORNIA																							
ARVIN																							
3 SLM	41	36	1.12	45	3.8	89	26	6.3	2.8	1	2	6.4	100 PERCENT	4.7	100	70	21	14	73				
BAKERSFIELD																							
3 MID	31	35	1.11	45	3.9	84	24	6.4	2.0	0	3	5.2	99 PERCENT	5.0	80	70	19	14	72				
BAKERSFIELD																							
3 SLM	41	35	1.09	45	4.0	89	26	5.9	2.2	2	3	6.4	98 PERCENT	4.6	90	70	17	17	71				
BUTTONWILLOW																							
3 MID	31	36	1.13	46	4.1	92	26	6.2	1.8	0	3	4.9	100 PERCENT	4.7	100	70	14	13	71				
CHOWCHILLA																							
3 SLM	41	36	1.15	48	4.4	95	28	6.3	2.7	2	3	5.7	92 PERCENT	5.5	100	80	24	19	85				
COALINGA																							
3 SLM PLUS	40	36	1.13	47	3.8	91	26	6.4	1.7	1	3	6.8	100 PERCENT	5.0	80	70	16	13	76				
FIREBAUGH																							
3 SLM	41	36	1.13	46	4.1	91	26	6.2	2.3	1	3	5.9	98 PERCENT	4.7	90	70	21	13	72				
KERNAN																							
3 MID	31	36	1.15	47	4.0	90	27	6.4	2.0	1	3	6.3	85 PERCENT	4.7	90	70	18	18	76				
LOST HILLS																							
3 SLM	41	36	1.13	47	4.3	99	27	6.1	2.7	1	3	6.6	100 PERCENT	4.7	90	70	24	19	77				
TULARE																							
3 SLM	41	36	1.13	46	4.0	96	26	5.9	2.4	2	2	5.3	100 PERCENT	4.8	90	70	27	21	82				
WESTMORLAND																							
1 MID LT SP	32	35	1.07	45	5.0	88	24	6.1	1.8	1	3	6.7	100 PERCENT	3.7	90	80	21	19	47				

1/ Cotton stuck to processing rolls

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification		Fiber Test Results										Processing Test Results - Carded Yarns									
		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint		Color Raw Stock		P & C Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial
No	Grade Name & Code	Stple	In	Pct	Rdg	Mpsi	G/tex	Pct	No	Gra	Yel	Pct	Lbs	Lbs	Pct	Pct	No	No	27 tx	50s or 12 tx	No
SOUTHEAST AREA																					
ALABAMA																					
ALBERTA																					
41	34	1.09	42	3.9	90	23	COKER 310	5.6	3.7	1	2	8.4	104	34	5.4	3.8	90	80	26	24	56
2	SLM								*	18.1			127	43	6.4	4.8	110	90	9	8	
GEORGIA																					
MADISON																					
42	35	1.16	43	4.4	85	23	COKER 310	7.0	4.0	2	4	7.1	111	39	5.5	4.2	110	90	17	16	57
3	SLM LT SP								*	14.7			129	47	6.3	4.9	110	100	8	5	
NORTH CAROLINA																					
DUNN																					
41	35	1.13	44	4.0	90	25	COKER 310	6.5	3.3	2	3	6.7	119	42	5.8	4.7	100	90	19	17	70
3	SLM								*	15.6			138	51	6.8	5.1	110	100	10	7	
SOUTH CAROLINA																					
HARTSVILLE																					
42	36	1.16	45	4.3	87	24	COKER 310	6.6	3.4	3	3	7.0	118	42	6.0	4.7	90	70	30	26	73
3	SLM LT SP								*	15.1			140	50	6.2	5.1	100	90	13	11	

* Comber Waste and Combed Yarn Data

